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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,547	10/30/2001	William L. Hergenrother	P01038USIA (P292)	8569
7590	10/09/2003		EXAMINER	MULLIS, JEFFREY C
			ART UNIT	PAPER NUMBER
			1711	8
DATE MAILED: 10/09/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/020,547	HERGENROTHER ET AL.
Examiner	Art Unit	
Jeffrey C. Mullis	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 July 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) Z . | 6) <input type="checkbox"/> Other: _____ .                                   |

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Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

It is unclear what the structure of the difunctional cross-linking agent embraces when  $m = 0$  given that sulfur is divalent and would be linked only to a single group R in cases where no Y group is present.

Claims 5, 9, 14 and 19 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as filed does not disclose that thiazoles may be used in the instant invention.

The amendment filed 1-29-03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: That thiazoles may be used in the instant invention.

Applicant is required to cancel the new matter in the response to this Office action.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yatsuyanagi et al. (USP 6,518,367).

See the previous Office action at the last complete paragraph on page 4.

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Claims 15-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yatsuyanagi et al., cited above.

See the previous Office action at page 5 at the last complete paragraph thereof.

Applicants' arguments filed 7-15-03 have been fully considered but they are not deemed to be persuasive.

With regard to applicants' allegations regarding the "restriction requirement", no restriction between the various inventions was required by the Examiner but rather only an election of species was required. With regard to the election of species, the reasons for insisting upon an election of species is that there is no disclosed relationship between them i.e. the "species under a genus which species are not usable together as disclosed". Note MPEP § 802.01 in this regard. This is the only reason that the Examiner knows for insisting upon an election of species and hence it hardly needs to be pointed out. Nor can the Examiner point to any particular evidence showing the absence of any disclosure of applicants of any relationship between the species. If applicants' specification discloses that the species are intended to be used together, then applicants should point out such a disclosure. The term ~~unity of invention~~ pertains to cases filed under the patent cooperation treaty. As the present case was not filed under 35 USC 371 it is not clear what applicants remarks have to do with the election of species

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requirement. In any case, Applicants argue that unity of invention exists where compounds included within a Markush group share a common utility (which the Examiner agrees with) and (2) share a substantial structural feature disclosed as being essential to that utility. However with regard to (2), the Examiner does not agree that the rubbers of the instant claims share a substantial structural feature simply because they are rubbers in that the term "rubber" does not describe a structural feature but rather only describes a characteristic. In any case the search will, of course, be extended upon allowance of a generic claim. Applicants argue that no specific rubber is disclosed or claimed as being critical to the invention but the Examiner cannot see how this is pertinent to the question of whether or not restriction is proper. Applicants argue that they could have recited a vulcanizable rubber *per se* in claim 1 and not recited a Markush group, but it is also not clear what this has to do with the propriety of the restriction requirement.

With regard to the issue of new matter, applicants argue that the generic term "thiazole" is supported by the disclosure of 2 specific thiazoles and cite In re Smythe which appears to hold that the disclosure of specific examples in the written description of a patent application is sufficient to support a generic claim when the use of the broader class would naturally occur to one skilled in the art reading the description. However

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applicants' argument is not developed in this regard since applicants have not pointed out how the disclosure of only two species would cause the concept of the broader class to naturally occur to those skilled in the art reading the description. It is not the position of the Examiner that any burden should be placed upon applicants to list very many structural or functional equivalents of disclosed elements. All that would have been needed of applicants was to disclose the use of "thiazoles". No other further description would have been necessary, not even a description of any specific species of thiazole. It may well be that the disclosure of a specific species would cause those skilled in the art to envision a broader genus but no general rule appears to have been made in the decisions cited by applicants that a species supported a genus.

With regard to the rejection under 35 U.S.C. § 112, second paragraph and issue of the clarity of the term "molecular weight", this issue has been withdrawn.

With regard to the issue of the structure of the difunctional cross-linking agent when  $m = 0$ , applicants argue that in such an instance "the agent is embodied in the structure  $(SRS)_n$ , where the two sulfurs are attached to each other within the ring". However it is unclear what "the ring" is. There is no ring in the structure recited in the first paragraph of page 8 of applicants' arguments.

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With regard to the rejection based on Yatsuyanagi et al. (USP 6,518,367), applicants argue that applicants' invention is based on the use of difunctional compounds such as dimercaptans which contain only two sulfurs per repeat unit, not 3-5 or 3-6. However the Abstract of Yatsuyanagi et al. discloses that sulfur compounds of Formula I may be used or a specific sulfur compound 1 and also discloses that sulfur compound of Formula 1 is combined with "other reagents". Apparently the "specific sulfur compound" includes polysulfide 4 in column 21 of the patent. It is noted that applicants' specification at page 14 also discloses that Thiokol LP-31 may be used in applicants' invention. This is the identical material used in the patent except for benzyl group termination. However benzyl group termination does not appear to be pertinent to the question of whether or not polysulfide 4 embraces the polysulfides of the claims given that the claims recite that Y may be arylene. Applicants argue that applicants' invention is different in that the mercaptan is allowed to be incorporated into the rubber without previous end capping. While it may be true that end capping is not necessarily conducted to produce the polysulfide of the claims, nonetheless the claims do embrace end capping if desired given the fact that the group Y of applicants' claims may be groups embraced by end cappers such as arylene etc.

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With regard to Maruyama et al., applicants' arguments regarding the rejection under 35 U.S.C. § 102 are moot since this rejection is hereby withdrawn.

**THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Mullis whose telephone number is (703) 308-2820. The examiner can normally be reached on Monday-Friday from 9:30 to 6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

J. Mullis:cdc

October 8, 2003

Jeffrey Mullis  
Primary Examiner  
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